

## **REMARKS**

Reconsideration is respectfully requested in light of the foregoing Amendment and remarks that follow.

Claims 3-8 are before the Examiner. Claim 9 has been cancelled. It appears to be redundant as suggested by the Examiner. Claim 3 has been amended to address the Examiner's concerns relative to written description and to address the outstanding objections, e.g. D3 and D5 formulas have been inserted into the claim. (Cyclic polysiloxanes types D3, D4 and D5 are well known, e.g. see, for example, U.S. Patent No. 6,303,256.) The specification will be amended to include the description of the formula upon an indication of allowable subject matter.

The outstanding objection to the specification will be attended to by amendment upon an indication of allowable subject matter. Until then, it is respectfully requested that the Examiner hold the requirement in abeyance.

The Examiner is thanked for the guidance provided during the personal interview held on August 5, 2004. The substance of the interview is accurately reflected on the PTOL-413 form. No agreement was reached.

Claim 9 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claim 9 has been cancelled thereby obviating the objection.

Claims 3-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. It is asserted that the claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants respectfully traverse.

It is agreed that there is no express support for the definition of "x" as being "one or more". It is respectfully submitted that implied support exists. The relevant formula, appearing in the specification, which include "-S<sub>x</sub>-" suggest that when S is present, it is present in integral amounts. This amount would be consistent with the chemistry of sulfur and the requirements of the stated formula and the function of silanizing agents. The formula disclosed in the specification correspond to known silanizing agents. Deller et al. ('240 patent), of record and assigned to the Assignee of record of the instant application, discloses the instant silanizing agents. Deller et al. defines "x" as being "0 or 1" for the instant formula in common. The inserted definition of "0, one or more" is believed impliedly supported by the specification as filed. "O[o]ne or more is clearly supported by the formula. "0" would be apparent to the artisan of ordinary skill. Sulfur does not have to be present for the compound to function as intended. See Deller et al. Further, one of skill in the art would recognize that applicants were in possession of a surface modified, pyrogenically produced oxide doped by aerosol. This recognition does not hinge on specific silanizing agents. A wide range of agents are disclosed. The disclosed invention is not the discovery of novel silanizing agents but rather the surface modified aerosol doped metal oxides. The claims have been amended to this value range for "x". Reconsideration is respectfully requested.

Claims 3-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim subject matter which applicant regards as the invention. Withdrawal of the rejection is respectfully requested in light of the amendment of claim 3 including the definition of "x" in section "g".

Claims 3, 4 and 6-9 are rejected under 35 U.S.C. 103(a) as unpatentable over Deller et al. (U.S. Patent No. 5,776,2402) in view of Mangold et al. (CA 2,223,377). Applicants respectfully traverse.

Deller et al ('240) discloses granules based on silicon dioxide. The granules are prepared by dispersing fumed silica in water, spray drying and optionally heating and/or silanizing the granules. These granules show an average particle size of 10 to 120 micrometers (see column 1, line 55). The fumed silica, which can be used as educt is mentioned in column 5, line 10 to 16.

Deller does not disclosed an aerosol doped fumed silica. The Examiner recognizes this and cites Mangold et al. to remedy this deficiency. The rationale appears to be it would be obvious to try adding a Mangold et al. property to the Deller et al. granules. However, it remains unclear what problem is evident in Deller et al. granules which would suggest the need to dope the granules using an aerosol.

Mangold et al (CA 2,223,377) discloses pyrogenically prepared oxides of metals and/or non-metals doped by an aerosol. This reference is silent about the surface-modification. No hint is given in respect to the use in polyester resins. The Examiner merely asserts that to would be obvious to try modify the Deller et al. metal oxide granules to include doped metal ions. There is no problem evident in Deller et al., which would suggest the need for doping surface modified

granules. Mangold et al. teach the use of aerosols avoid the prior art problems of a non-homogeneous distribution of the doping substance in the primary particle and the presence of inhomogeneities.

There is no recognition in either reference of the numerous advantages listed on page 13 of the instant specification for the surface-modified, pyrogenically produced metal oxides of the invention including their ability to be work more rapidly into polyester resins and at higher concentrations.

Accordingly, it is respectfully submitted that a proper prima facie case of obviousness has not been established. The references do not suggest their combination. It appears that the references were assembled in part based on the teachings provided in the instant specification. Withdrawal of the rejection is respectfully requested.

Claims 3, 5, 8 and 9 are rejected under 35 U.S.C. 103(a) as unpatentable over Läufer et al. (U.S. Patent No. 4,022,152) in view of Mangold et al. (CA 2,223,377). Applicants respectfully traverse.

According to the claimed invention, Applicants do not claim granules, but rather claim a powdery pyrogenically produced oxides doped by an aerosol, which are surface modified.

Läufer et al. (US 4,022,152) disclose that the pyrogenically produced silica must be absolutely dry before it is surface modified by the cyclic organopolysiloxanes (see column 5, lines 50 to 67). The reason apparently is that surface-adsorbed water impacts the required chemical reaction the silanizing agent and the surface OH groups. This apparently impacts the stability of the hydrophobic layer. See col. 2 at lines 45-59. (There is no hint that the pyrogenically produced silica can be doped by an aerosol, which contains water and a salt of a metal.)

The solution suggested by Läufer et al. to the bound water problem is the treatment of the particles, prior to treatment with the silanizing agent, with a dry, inert gas stream in a fluidized bed for a period of a few seconds to a few minutes to absolutely dry the particles. This frees the particles of all physically and chemically bound water. See col. 4, lines 48-68.

Mangold et al teach as above.

As to the combination of Mangold et al. and Läufer et al., there is no problem apparent in Läufer et al. for which Mangold provides a solution. Of significance here, if one follows the rationale of the Examiner, one would add a water solution to the particles which Läufer et al. is trying to rid of both physically and chemically bound water. Läufer et al. would appear to teach away from the invention. It is not clear how Läufer et al would have made the invention obvious. If the Examiner wishes to rely on certain portions of the reference but not others, it would be useful for that rationale (guidance) to be set forth in the next Office Action.

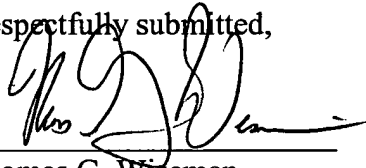
There is no recognition in either reference of the numerous advantages listed on page 13 of the instant specification for the surface-modified, pyrogenically produced metal oxides of the invention including their ability to be work more rapidly into polyester resins and at higher concentrations.

Accordingly, it is respectfully submitted that a proper prima facie case of obviousness has not been established. The references do not suggest their combination. It appears that the references were assembled in part based on the teachings provided in the instant specification. A teaching suggesting the addition of a water solution to a surface does not appear on its face to be consistent with a teaching of its removal from the same surface. Withdrawal of the rejection is respectfully requested.

In view of the foregoing amendments and remarks, the application is believed to be in condition for allowance and a notice to that effect is respectfully requested.

Should the Examiner not find the Application to be in allowable condition or believe that a conference would be of value in expediting the prosecution of the Application, Applicants request that the Examiner telephone undersigned Counsel to discuss the case and afford Applicants an opportunity to submit any Supplemental Amendment that might advance prosecution and place the Application in allowable condition.

Respectfully submitted,



Thomas G. Wiseman  
(Registration No. 35,046)

VENABLE  
Post Office Box 34385  
Washington, DC 20043-9998  
Telephone: (202)344-4800  
Direct dial: 202-344-4614  
Telefax : (202) 344-8300

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